

Claims

1. A control arrangement for the pressure medium supply of at least two hydraulic consumers, comprising a pump having a variable capacity, and comprising two adjustable meter-in orifices, a first one of which is disposed between a supply line issuing from the pump and a first hydraulic consumer, and the second one of which is disposed between a supply line and a second hydraulic consumer, and comprising two pressure compensators, a first one of which is arranged downstream from the first meter-in orifice, and the second one of which is arranged downstream from the second meter-in orifice, and the control pistons of which are adapted to be subjected on a front side to the pressure downstream from the respective meter-in orifice in the opening direction, and in the closing direction to the highest load pressure or to a pressure derived therefrom, wherein the pump and the meter-in orifices are adjustable, preferably proportionally, characterized by a control means for outputting a control signal to the pump in dependence on the target values predetermined for the meter-in orifices.

2. The control arrangement in accordance with claim 1, wherein the flow rate of the pump may be adjusted electrically by means of proportional solenoids.

3. The control arrangement in accordance with claim 1 or 2, wherein the meter-in orifice having the highest target value may be opened fully with the aid of the control means, and the other meter-in orifices may be caused to follow up accordingly.

4. The control arrangement in accordance with any one of the preceding claims, characterized in that the control means include a data storage wherein the characteristics of the variable displacement pump and of the meter-in orifices are stored.

5. The control arrangement in accordance with any one of the preceding claims, characterized in that the pump is an axial piston pump.

6. The control arrangement in accordance with any one of the preceding claims, comprising a rotational speed sensor for detecting the pump speed.

7. The control arrangement in accordance with any one of the preceding claims, comprising anti-cavitation valves whereby the pressure medium chambers of the consumers may be connected with a tank, so that pressure medium may be replenished into the pressure medium chambers in the case of a pulling load.

8. The control arrangement in accordance with any one of the preceding claims, wherein the target values are detected in dependence on the adjustment of a joystick or in dependence on the control piston position of the meter-in orifices.

9. A method for controlling at least two hydraulic consumers adapted to be supplied with pressure medium through the intermediary of a variable-capacity pump, wherein to each consumer a meter-in orifice is associated, that are provided between the pump and the respective consumer and downstream of which a respective pressure compensator is arranged, the control piston of which is subjected to the pressure behind the upstream meter-in orifice in the opening direction, and in the

closing direction to the highest load pressure or to a pressure derived therefrom, characterized in that the pump is operated in dependence on the target values predetermined for the meter-in orifices.

10. The method in accordance with claim 9, wherein the meter-in orifice to be set to the highest target value is opened fully, and the other meter-in orifices are caused to follow up accordingly.

11. The method in accordance with claim 9 or 10, wherein the flow rate of the pump is reduced and pressure medium is replenished via anti-cavitation valves to the low-pressure side of the consumers in the case of a pulling load.